

Title (en)

A SYSTEM AND METHOD FOR CLUSTERING WI-FI FINGERPRINTS FOR INDOOR-OUTDOOR DETECTION

Title (de)

SYSTEM UND VERFAHREN ZUM CLUSTERN VON WI-FI-FINGERABDRÜCKEN ZUR INNENBEREICH-AUSSENBEREICH-DETEKTION

Title (fr)

SYSTÈME ET PROCÉDÉ PERMETTANT DE REGROUPER DES EMPREINTES DIGITALES WI-FI POUR DÉTECTION INTÉRIEUR-EXTÉRIEUR

Publication

**EP 3396400 B1 20201111 (EN)**

Application

**EP 18169445 A 20180426**

Priority

IL 25196717 A 20170427

Abstract (en)

[origin: EP3396400A1] The present invention relates to a system and method for detecting the indoor and outdoor location of a mobile device user. The system comprises one or more Wi-Fi Access Points (APs), and one or more mobile devices, adapted to scan for Wi-Fi APs and receive a Received Signal Strength Indication (RSSI) level of one or more detected AP. A trained classifier being a software module is adapted to: receive as input one or more Wi-Fi fingerprints from a training set, cluster the one or more Wi-Fi fingerprints, generate a fingerprint transition graph, the graph being an undirected, cluster transition graph, the nodes of which are the clusters, and classify, using a dedicated classification algorithm each node of the fingerprint transition graph to indoor or outdoor, by extracting features related to the RSSI of the nodes.

IPC 8 full level

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CPC (source: EP IL US)

**G01S 5/00** (2013.01 - IL); **G01S 5/012** (2020.05 - EP); **G01S 5/015** (2020.05 - EP); **G01S 5/02521** (2020.05 - EP IL US)

Citation (examination)

EP 3404438 A2 20181121 - SAMSUNG ELECTRONICS CO LTD [KR]

Cited by

CN111639712A; CN110933631A; CN113515962A; CN109587627A; CN109936848A; CN117320150A; WO2023128867A3

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